

SECTION 3

MORTALITY

This section of the report focuses on mortality patterns, first comparing males with females, and second, comparing females of different race/ethnic groups. These data were obtained from the California death certificates for the years 1985-1994.

As in other industrialized societies, the two most common causes of death in California are heart disease and cancer. As shown in Table 3.1, heart disease deaths in 1994 numbered 33,816 for males (29.0 percent of all male deaths) and 34,496 deaths for females (or 32.4 percent). Cancer deaths for males accounted for 26,103 or 22.4 percent of all male deaths. Females had 25,144 deaths due to cancer, or 23.6 percent of all female deaths. Comparisons between males and females showed that the remaining eight causes of death were different for each. For males, the third leading cause of death was unintentional injury deaths, accounting for 6,421 or 5.5 percent of all males deaths; while for females it was stroke, with 9,421 deaths or 8.9 percent of all female deaths. The fourth and fifth leading causes of death for males were stroke and AIDS. For females, they were Chronic Obstructive Pulmonary Disease (COPD) and Pneumonia/Influenza.

Another striking difference between males and females was the finding that diabetes was the seventh leading cause of death for females but was not included in the ten leading causes of deaths for males. Additionally, homicide and suicide were the eighth and ninth causes of death for males, but were not in the ten leading causes of death for females. It is interesting to note that while a large portion of the research on heart disease has historically used only male participants, a larger portion of female deaths are due to heart disease (32.4) in comparison with males (29.0 percent).

Age-Adjusted Death Rates for Females

The rates shown in the in next five tables are age-adjusted using the 1940 standard million as the standard. Age-adjusting eliminates the effects of age when calculating rates and allows for a more meaningful comparison among race/ethnic groups. Race/ethnic groups have different age compositions, with whites having an older population and Hispanics having a younger one. Using age-adjusted rates removes the differences that would be a result of differences in the age composition of the populations being compared. (For further explanation of calculation of age-adjusted rates, see Appendix E).

Age-adjusted mortality rates for selected causes are presented in Table 3.2 for the period 1985 through 1994. They are listed in order from highest rate to lowest. Note that the order differs from that of Table 3.1, which presents percentages of all deaths. This difference results from the age-adjustment of the mortality rates (See Appendix E). For all females, there were statistically significant decreasing trends over the ten-year period for heart disease, stroke, all cancers, breast cancer, motor vehicle accidents and suicide. Trends for homicides, cervical cancer deaths, and unintentional injury deaths have been decreasing but these trends were not statistically significant. The greatest decreases were for suicide (34.0 percent), unintentional injuries (32.0

percent) and homicide (27.8 percent). Mortality rates for lung cancer, diabetes and AIDS showed statistically significant increases since 1985.

Cancer had the highest age-adjusted rate per 100,000 females with a rate of 104.2 in 1994. The cancer death rate has shown a statistically significant decrease since 1985, when the rate was 111.0. Significant shifts occurred in the relative frequency of the site for cancer. Breast cancer deaths showed a significant decrease between 1985 and 1994, while lung cancer deaths showed a significant increase. In 1994, the age-adjusted death rate for lung cancer was 25.2 per 100,000 females while the age-adjusted death rate for breast cancer was 19.9. Age-adjusted death rates for cervical cancer have remained fairly stable over the ten-year period. No significant trend was found for cervical cancer.

The second-highest age-adjusted mortality rate among females was for heart disease. There has been a steady and statistically significant decrease in heart disease mortality over the ten-year period. In 1985 the age-adjusted death rate for heart disease was 91.7 per 100,000 females and by 1994 that rate had dropped to 73.9.

Diabetes deaths had the third-highest age-adjusted rate for females. In 1985, the rate was 31.6 per 100,000 females and by 1994 that rate had increased to 36.2, a trend that was statistically significant. Stroke deaths were the fourth-highest age-adjusted rate for females. Since 1985 when the age-adjusted death rate was 29.4, the mortality rate for stroke has decreased significantly, to 23.8 per 100,000 females.

Trends in Mortality for White Females

Table 3.3 displays trend data for white females from 1985 through 1994. The three highest age-adjusted death rates for white females were the same as for the total female population. Age-adjusted death rates for cancer for white females have decreased over the ten-year period, although the decrease was not statistically significant. The cancer death rate in 1985 was 119.2 and has been steadily decreasing since 1992. Significantly decreasing trends were also shown for heart disease, stroke, breast cancer, unintentional injuries, motor vehicle deaths, homicide and suicide. Cervical cancer deaths, while decreasing slightly in 1994, have maintained a stable trend over the ten-year period. AIDS deaths have shown a statistically significant increase.

Trends in Mortality for African American Females

African American females had the highest age-adjusted death rates for all of the selected causes of death except for motor vehicle deaths and suicides, compared with the female population as a whole. Trend data for African American females are shown in Table 3.4. Deaths due to all cancers, including breast, lung and cervical, were higher for African American females than for any other race/ethnic group examined. The age-adjusted cancer death rate for African American females was 141.1 in 1985 and even though the rate decreased to 137.8 in 1994, the decrease was not statistically significant.

Lung cancer death rates are almost three times higher for both African American and white females when compared with Hispanic and Asian/Other females and almost twice as high for breast cancer death rates. Deaths due to diabetes for African American females is over twice as high as any other race/ethnic group. The age-adjusted death rate for diabetes was 88.1 per 100,000 African American females compared with 30.8 for white, 48.4 for Hispanic and 30.8 for

Asian/Other women.

African American females had the highest age-adjusted death rate for homicides, 13.6 per 100,000 African American females in 1994. The homicide rate has fluctuated over the ten-year period and no significant trend was found. However, the age-adjusted homicide rate for African American females was over three times higher than that of any other race/ethnic group in 1994. In addition, the age-adjusted death rate for AIDS for African American females (14.5 per 100,000 African American females) was over seven times higher than for any other race/ethnic group.

Trends in Mortality for Hispanic Females

While the rank order of age-adjusted mortality rates for Hispanic females were the same as white and African American females, the mortality rates were considerably lower. Table 3.5 displays trend data for Hispanic females. The age-adjusted cancer death rate for Hispanic females in 1994 was about half as high as for African American and white females. Hispanic females had the lowest age-adjusted cancer death rate (61.0) compared with the remaining race/ethnic groups: 137.8 for African American females, 115.0 for white females and 71.0 for Asian/Other females. Hispanic females were the only group in which the age-adjusted death rate for breast cancer was higher than for lung cancer. The death rate for breast cancer in 1994 was 11.8 per 100,000 Hispanic females and 7.3 for lung cancer. None of the trends for all cancer, breast, lung or cervical cancer were statistically significant for Hispanic females.

The second-highest age-adjusted death rate for Hispanic females was for heart disease. In 1985, the death rate was 67.9 and by 1994 the rate had decreased to 53.3, a trend that was statistically significant. Among Hispanic females, age-adjusted death rates for both diabetes and AIDS were the second-highest (following African American females) of all the race/ethnic groups examined. Diabetes death rates showed no significant trend, remaining fairly stable over the ten-year period. However, deaths due to AIDS have increased significantly since 1985. Two other causes of death showed statistically significant trends: stroke, decreasing from 21.3 in 1985 to 17.0 in 1994, and suicides, decreasing from 1.8 in 1985 to 1.3 in 1994.

Trends in Mortality for Asian/Other Females

As shown in Table 3.6, the highest age-adjusted death rate for Asian/Other females was also for cancer. While the rate of 71.0 per 100,000 Asian/Other females was considerably lower than the corresponding rate for African American or white females, it was higher than the rate for Hispanic females (61.0). However, Asian/Other females were the only group for which cancer has been increasing, a trend that was statistically significant. Although death rates for both breast and lung cancer increased slightly over the ten-year period, the trends were not significant. Asian/Other females were the only group in which death rates for both breast and lung cancer were almost identical (11.4 for breast and 11.2 for lung cancer).

Asian/Other females had the lowest age-adjusted death rate for heart disease when compared with the other race/ethnic groups. The rate remained fairly stable over the ten-year period with no significant trend. In 1985 the age-adjusted death rate was 48.6 and had decreased slightly by 1994 to 47.3. The third-highest death rate for Asian/Other females was also diabetes. In 1985, the death rate for diabetes was 22.8 and by 1994 the rate had increased significantly to 30.8.

White and Asian/Other females both have the lowest diabetes age-adjusted death rates in 1994, with 30.8 each. While the trend for diabetes deaths has increased for all race/ethnic groups, the increasing trend was statistically significant for only Asian/Other females. Asian/Other females had the second-highest rate for suicide deaths (4.0 per 100,000 Asian/Other females) following behind the suicide death rate for White females at 6.2.

Age-adjusted death rates for stroke (24.2) were higher for Asian/Other females when compared with the other race/ethnic groups, except for African American females (45.7). The death rate due to AIDS was lowest for Asian/Other females, with an age-adjusted death rate of 0.9 per 100,000.

Leading Causes of Death by Age

The age-specific death numbers and mortality rates (deaths per 100,000 population in each age group) for 1994 are shown in Table 3.7, for males and females. At each age, the male mortality rate was higher than the corresponding female rate. The difference was greatest for ages 15-34 years and smallest for infants and persons 85+ years. (For further detail, please see Appendix B.)

Among females, the mortality rate for African Americans was higher than for whites at all ages. As shown in Figure 3.1, the difference was greatest for ages 25-54 years and for babies under one year of age. There was virtually no African American-white difference by age 85 years. Among Hispanics and Asian/Others, the age-specific mortality rate was lower than that of whites at most ages. They were about equal to white mortality rates among children from birth to age four years (Hispanics only) and ages 20-24 years (both groups).

The five leading causes of death for all females combined in 1994 are shown in Table 3.8 ranked for each age group. Unintentional injuries were the leading cause of death from age one year to age 34. Sixty to 90 percent of these injuries were due to motor vehicle crashes. From age 35 to age 74, cancers were the leading cause of death. Within this age range, the leading type of cancer was breast cancer up to age 64 years, lung cancer at ages 65-84, and colorectal cancer thereafter. From age 75 years onward, the leading cause of death was heart disease. For infants (under age one) the leading cause of death was perinatal conditions.

The second leading cause of death was congenital anomalies up to age four years, cancer (mostly leukemia) up to age 14, homicide up to age 24, breast cancer up to age 44, unintentional injuries up to age 44, heart disease up to age 74, then unintentional injuries and cerebrovascular diseases. The third, fourth and fifth leading causes are shown in Table 3.8.

In Table 3.9 are shown the age-specific mortality rates associated with these leading causes of death at each age level. Homicide, suicide and AIDS were among the leading causes of death for teen and young adults (up to age 44). The homicide mortality rate was highest at ages 15-34 years (5.5-6.0 per 100,000). As shown in Table 3.10, this rate was three to four times higher among young African American women than among women of other race/ethnic groups.

The mortality rate (deaths per 100,000 females) for heart disease increased steadily from age 20-24 (2.0) to age 85+ (6,073.6). It was higher among African American women at all ages (Table 3.11). Cancer-related mortality also increased steadily from age 1-4 years (2.1 per 100,000) to age 85+ years (1,240.7). Among causes of cancer, breast cancer mortality increased from 2.3 per 100,000 at age 25-34 years to 183.4 per 100,000 for women age 85 and older. Lung cancer

mortality peaked at age 75-84 (255.2 per 100,000) and then declined among women age 85 and older (179.1 per 100,000). As shown in Table 3.12, breast cancer mortality rates were higher for African American women up to age 74 years and higher among white women at ages 75 and older.

Among the elderly, chronic obstructive pulmonary disease (COPD), diabetes, and hereditary/degenerative diseases emerged as leading causes of death. COPD became a leading cause of death at age 55-64 (40.3 per 100,000) and the associated mortality rate increased with age, up to 85+ years (468.2 per 100,000). As shown in Table 3.13, white women had the highest COPD mortality rate at all ages. Falls became an important cause of death in women over age 85, with the highest rates found in white women (See Table 3.14). Pneumonia and influenza, which were among the leading causes of death for infants, reemerged among the top five causes of death for women ages 65 and older. As shown in Table 3.15, the pneumonia and influenza mortality rates were higher among white and African American women, compared with Hispanic and Asian/Other women.

Summary of Leading Causes of Death

The ten leading causes of death among females in California in 1994 were heart disease, cancers, stroke, COPD, pneumonia/influenza, unintentional injuries, diabetes, hereditary/degenerative diseases, atherosclerosis, and cirrhosis of the liver. The three diseases related to the cardiovascular system (heart disease, stroke and atherosclerosis) together accounted for about 43 percent of all female deaths. There was a significant downward trend in cardiovascular disease during the past decade. Decreases have also been shown for cancer among all race/ethnic groups except Asian/Other females, for whom there was a statistically significant increase.

Mortality rates for breast cancer were twice as high among white and African American females when compared to Hispanic and Asian/Other females. The same was true for lung cancer deaths.

Mortality rates for diabetes have increased during the past decade for all race/ethnic groups. However, the risk of mortality due to diabetes was approximately twice as high among African American women compared with other groups. It was also elevated for Hispanic women.

African American women had elevated mortality rates for homicide compared with other race/ethnic groups, while white women were at greater risk for death due to suicide.

There was a significant upward trend in AIDS-related deaths during this period. The risk was about seven times higher among African American women than among any other group.